

# SEQUENCE LISTING

<110> Pramod K. Srivastava

<120> ALPHA(2) MACROGLOBULIN RECEPTOR AS A HEAT SHOCK  
PROTEIN RECEPTOR AND USES THEREOF

<130> 8449-123

<140> 09/625,137

<141> 2000-07-25

<150> 60/209,095

<151> 2000-06-02

<160> 59

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 14849

<212> DNA

<213> Mus musculus

<400> 1

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Asp Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile
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Cys Pro Gln Ser Lys Ala Gln Arg Cys Pro Pro Asn Glu His Ser Cys
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Leu Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Ile
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Gln Asp Cys Met Asp Gly Ser Asp Glu Gly Ala His Cys Arg Glu Leu
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Arg Ala Asn Cys Ser Arg Met Gly Cys Gln His His Cys Val Pro Thr
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Pro Ser Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Glu Ala
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Cys Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Thr Cys Gly Cys
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Glu	Thr	Val	Cys	Trp	Val	His	Val	Gly	Asp	Ser	Ala	Ala	Gln	Thr	Gln
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Glu	Arg	Glu	Thr	Ile	Leu	Lys	Asp	Gly	Ile	His	Asn	Val	Glu	Gly	Val
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 <211> 126  
 <212> PRT  
 <213> Homo sapiens

<400> 7  
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 20 25 30  
 Leu Thr Ser Phe Glu Val Val Ile Gln Tyr Gly Leu Ala Thr Pro Glu  
 35 40 45  
 Gly Leu Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser  
 50 55 60  
 Asn Leu Asp Gln Ile Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr  
 65 70 75 80  
 Thr Leu Leu Ala Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp  
 85 90 95  
 Pro Arg Asp Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro  
 100 105 110  
 Arg Ile Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg Thr  
 115 120 125

<210> 8  
 <211> 153  
 <212> PRT  
 <213> Homo sapiens

<400> 8  
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 Lys Val Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr  
 20 25 30  
 Asn Ile Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly Val Gln  
 35 40 45  
 Thr Leu Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln  
 50 55 60  
 Ile Ser Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met  
 65 70 75 80  
 Ala Ile Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro  
 85 90 95  
 Thr Val Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu Val  
 100 105 110  
 Ser Ser Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr  
 115 120 125  
 Leu Ser Leu Phe Phe Thr Val Leu Gln Asp Val Pro Val Arg Asp Leu  
 130 135 140  
 Lys Pro Ala Ile Val Lys Val Tyr Asp  
 145 150

<210> 9  
 <211> 138  
 <212> PRT  
 <213> Homo sapiens

<400> 9  
 Met Lys Val Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser Leu Lys  
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 Tyr Asn Ile Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly Val  
 20 25 30  
 Gln Thr Leu Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe  
 35 40 45  
 Gln Ile Ser Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn  
 50 55 60  
 Met Ala Ile Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys  
 65 70 75 80  
 Pro Thr Val Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu  
 85 90 95  
 Val Ser Ser Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln  
 100 105 110  
 Thr Leu Ser Leu Phe Phe Thr Val Leu Gln Asp Val Pro Val Arg Asp  
 115 120 125  
 Leu Lys Pro Ala Ile Val Lys Val Tyr Asp  
 130 135

<210> 10  
 <211> 27  
 <212> PRT  
 <213> Homo sapiens

<400> 10  
 Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile Val  
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 Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu  
 20 25

<210> 11  
 <211> 126  
 <212> PRT  
 <213> Homo sapiens

<400> 11  
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 Val Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn  
 20 25 30  
 Ile Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly Val Gln Thr  
 35 40 45  
 Leu Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile  
 50 55 60  
 Ser Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala  
 65 70 75 80  
 Ile Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr  
 85 90 95  
 Val Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu Val Ser  
 100 105 110  
 Ser Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln  
 115 120 125

<210> 12  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 12  
 Leu Gln Gln Val Ser Leu Pro Glu Leu Pro Gly Glu Tyr Ser Met Lys

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Val Thr Gly	Glu Gly Cys Val Tyr	Leu Gln Thr Ser Leu	Lys Tyr Asn
	20	25	30
Ile Leu Pro	Glu Lys Glu Glu Phe	Pro Phe Ala Leu Gly	Val Gln Thr
	35	40	45
Leu Pro Gln	Thr Cys Asp Glu	Pro Lys Ala His Thr	Ser Phe Gln Ile
	50	55	60
Ser Leu Ser	Val Ser Tyr Thr	Gly Ser Arg Ser	Ala Ser Asn Met Ala
65	70	75	80
Ile Val Asp	Val Lys Met Val	Ser Gly Phe Ile	Pro Leu Lys Pro Thr
	85	90	95
Val Lys Met	Leu Glu Arg Ser	Asn His Val Ser	Arg Thr Glu Val
	100	105	110

<210> 13  
 <211> 81  
 <212> PRT  
 <213> Homo sapiens

<400> 13
Leu Gln Gln Val Ser Leu Pro Glu Leu Pro Gly Glu Tyr Ser Met Lys
1 5 10 15
Val Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn
20 25 30
Ile Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly Val Gln Thr
35 40 45
Leu Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile
50 55 60
Ser Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala
65 70 75 80
Ile

<210> 14  
 <211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 14
Gln Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu Lys Glu Glu Phe Pro
1 5 10 15
Phe Ala Leu Gly Val Gln Thr Leu Pro Gln Thr Cys Asp Glu Pro Lys
20 25 30
Ala His Thr Ser Phe Gln Ile Ser Leu Ser Val Ser Tyr Thr Gly Ser
35 40 45
Arg Ser Ala Ser Asn Met Ala Ile Val Asp Val Lys Met Val Ser Gly
50 55 60
Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu Glu Arg Ser Asn His
65 70 75 80
Val Ser Arg Thr Glu Val Ser Ser Asn His Val Leu Ile Tyr Leu Asp
85 90 95
Lys Val Ser Asn Gln
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<210> 15  
 <211> 76  
 <212> PRT  
 <213> Homo sapiens

<400> 15
Gln Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu Lys Glu Glu Phe Pro

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Phe	Ala	Leu	Gly	Val	Gln	Thr	Leu	Pro	Gln	Thr	Cys	Asp	Glu	Pro	Lys
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Ala	His	Thr	Ser	Phe	Gln	Ile	Ser	Leu	Ser	Val	Ser	Tyr	Thr	Gly	Ser
		35					40					45			
Arg	Ser	Ala	Ser	Asn	Met	Ala	Ile	Val	Asp	Val	Lys	Met	Val	Ser	Gly
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Phe	Ile	Pro	Leu	Lys	Pro	Thr	Val	Lys	Met	Leu	Glu				
65					70					75					

<210> 16  
 <211> 56  
 <212> PRT  
 <213> Homo sapiens

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Phe	Ala	Leu	Gly	Val	Gln	Thr	Leu	Pro	Gln	Thr	Cys	Asp	Glu	Pro	Lys
			20					25					30		
Ala	His	Thr	Ser	Phe	Gln	Ile	Ser	Leu	Ser	Val	Ser	Tyr	Thr	Gly	Ser
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<210> 17  
 <211> 76  
 <212> PRT  
 <213> Homo sapiens

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Ser	Val	Ser	Tyr	Thr	Gly	Ser	Arg	Ser	Ala	Ser	Asn	Met	Ala	Ile	Val
			20					25					30		
Asp	Val	Lys	Met	Val	Ser	Gly	Phe	Ile	Pro	Leu	Lys	Pro	Thr	Val	Lys
		35					40					45			
Met	Leu	Glu	Arg	Ser	Asn	His	Val	Ser	Arg	Thr	Glu	Val	Ser	Ser	Asn
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<210> 18  
 <211> 76  
 <212> PRT  
 <213> Homo sapiens

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Ser	Val	Ser	Tyr	Thr	Gly	Ser	Arg	Ser	Ala	Ser	Asn	Met	Ala	Ile	Val
			20					25					30		
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<210> 19  
 <211> 31

<212> PRT  
 <213> Homo sapiens

<400> 19  
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 Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile  
 20 25 30

<210> 20  
 <211> 44  
 <212> PRT  
 <213> Homo sapiens

<400> 20  
 Lys Thr Cys Ser Pro Lys Gln Phe Ala Cys Arg Asp Gln Ile Thr Cys  
 1 5 10 15  
 Ile Ser Lys Gly Trp Arg Cys Asp Gly Glu Arg Asp Cys Pro Asp Gly  
 20 25 30  
 Ser Asp Glu Ala Pro Glu Ile Cys Pro Gln Ser Lys  
 35 40

<210> 21  
 <211> 86  
 <212> PRT  
 <213> Homo sapiens

<400> 21  
 Lys Thr Cys Ser Pro Lys Gln Phe Ala Cys Arg Asp Gln Ile Thr Cys  
 1 5 10 15  
 Ile Ser Lys Gly Trp Arg Cys Asp Gly Glu Arg Asp Cys Pro Asp Gly  
 20 25 30  
 Ser Asp Glu Ala Pro Glu Ile Cys Pro Gln Ser Lys Ala Gln Arg Cys  
 35 40 45  
 Gln Pro Asn Glu His Asn Cys Leu Gly Thr Glu Leu Cys Val Pro Met  
 50 55 60  
 Ser Arg Leu Cys Asn Gly Val Gln Asp Cys Met Asp Gly Ser Asp Glu  
 65 70 75 80  
 Gly Pro His Cys Arg Glu  
 85

<210> 22  
 <211> 43  
 <212> PRT  
 <213> Homo sapiens

<400> 22  
 Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu Gly Thr Glu  
 1 5 10 15  
 Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln Asp Cys Met  
 20 25 30  
 Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu  
 35 40

<210> 23  
 <211> 42  
 <212> PRT  
 <213> Homo sapiens

<400> 23  
 Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln

1		5		10		15									
Glu	Arg	Trp	Lys	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Leu	Asp	Asn	Ser	Asp
			20					25					30		
Glu	Ala	Pro	Ala	Leu	Cys	His	Gln	His	Thr						
		35					40								

<210> 24  
 <211> 82  
 <212> PRT  
 <213> Homo sapiens

<400> 24															
Gln	Cys	Gln	Pro	Gly	Glu	Phe	Ala	Cys	Ala	Asn	Ser	Arg	Cys	Ile	Gln
1				5					10					15	
Glu	Arg	Trp	Lys	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Leu	Asp	Asn	Ser	Asp
			20					25					30		
Glu	Ala	Pro	Ala	Leu	Cys	His	Gln	His	Thr	Cys	Pro	Ser	Asp	Arg	Phe
		35					40					45			
Lys	Cys	Glu	Asn	Asn	Arg	Cys	Ile	Pro	Asn	Arg	Trp	Leu	Cys	Asp	Gly
	50					55					60				
Asp	Asn	Asp	Cys	Gly	Asn	Ser	Glu	Asp	Glu	Ser	Asn	Ala	Thr	Cys	Ser
65					70					75					80
Ala	Arg														

<210> 25  
 <211> 122  
 <212> PRT  
 <213> Homo sapiens

<400> 25															
Gln	Cys	Gln	Pro	Gly	Glu	Phe	Ala	Cys	Ala	Asn	Ser	Arg	Cys	Ile	Gln
1				5					10					15	
Glu	Arg	Trp	Lys	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Leu	Asp	Asn	Ser	Asp
			20					25					30		
Glu	Ala	Pro	Ala	Leu	Cys	His	Gln	His	Thr	Cys	Pro	Ser	Asp	Arg	Phe
		35					40					45			
Lys	Cys	Glu	Asn	Asn	Arg	Cys	Ile	Pro	Asn	Arg	Trp	Leu	Cys	Asp	Gly
	50					55					60				
Asp	Asn	Asp	Cys	Gly	Asn	Ser	Glu	Asp	Glu	Ser	Asn	Ala	Thr	Cys	Ser
65					70					75					80
Ala	Arg	Thr	Cys	Pro	Pro	Asn	Gln	Phe	Ser	Cys	Ala	Ser	Gly	Arg	Cys
				85					90					95	
Ile	Pro	Ile	Ser	Trp	Thr	Cys	Asp	Leu	Asp	Asp	Asp	Cys	Gly	Asp	Arg
			100					105					110		
Ser	Asp	Glu	Ser	Ala	Ser	Cys	Ala	Tyr	Pro						
		115					120								

<210> 26  
 <211> 161  
 <212> PRT  
 <213> Homo sapiens

<400> 26															
Gln	Cys	Gln	Pro	Gly	Glu	Phe	Ala	Cys	Ala	Asn	Ser	Arg	Cys	Ile	Gln
1				5					10					15	
Glu	Arg	Trp	Lys	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Leu	Asp	Asn	Ser	Asp
			20					25					30		
Glu	Ala	Pro	Ala	Leu	Cys	His	Gln	His	Thr	Cys	Pro	Ser	Asp	Arg	Phe
		35					40					45			
Lys	Cys	Glu	Asn	Asn	Arg	Cys	Ile	Pro	Asn	Arg	Trp	Leu	Cys	Asp	Gly

50	55	60
Asp Asn Asp Cys Gly	Asn Ser Glu Asp Glu Ser	Asn Ala Thr Cys Ser
65	70	75
Ala Arg Thr Cys Pro	Pro Asn Gln Phe Ser Cys	Ala Ser Gly Arg Cys
	85	90
Ile Pro Ile Ser Trp Thr	Cys Asp Leu Asp Asp	Asp Cys Gly Asp Arg
	100	105
Ser Asp Glu Ser Ala Ser	Cys Ala Tyr Pro Thr	Cys Phe Pro Leu Thr
	115	120
Gln Phe Thr Cys Asn Asn	Gly Arg Cys Ile Asn	Ile Asn Trp Arg Cys
	130	135
Asp Asn Asp Asn Asp	Cys Gly Asp Asn Ser	Asp Glu Ala Gly Cys Ser
145	150	155
His		160

<210> 27  
 <211> 208  
 <212> PRT  
 <213> Homo sapiens

<400> 27
Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln
1 5 10 15
Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp
20 25 30
Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro Ser Asp Arg Phe
35 40 45
Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly
50 55 60
Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser
65 70 75 80
Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys
85 90 95
Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg
100 105 110
Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr
115 120 125
Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys
130 135 140
Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser
145 150 155 160
His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile
165 170 175
Pro Glu His Trp Thr Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser
180 185 190
Asp Glu Thr His Ala Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly
195 200 205

<210> 28  
 <211> 150  
 <212> PRT  
 <213> Homo sapiens

<400> 28
Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln
1 5 10 15
Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp
20 25 30
Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro Ser Asp Arg Phe
35 40 45

Lys	Cys	Glu	Asn	Asn	Arg	Cys	Ile	Pro	Asn	Arg	Trp	Leu	Cys	Asp	Gly
50						55					60				
Asp	Asn	Asp	Cys	Gly	Asn	Ser	Glu	Asp	Glu	Ser	Asn	Ala	Thr	Cys	Ser
65					70					75					80
Ala	Arg	Thr	Cys	Pro	Pro	Asn	Gln	Phe	Ser	Cys	Ala	Ser	Gly	Arg	Cys
			85						90					95	
Ile	Pro	Ile	Ser	Trp	Thr	Cys	Asp	Leu	Asp	Asp	Asp	Cys	Gly	Asp	Arg
			100					105					110		
Ser	Asp	Glu	Ser	Ala	Ser	Cys	Ala	Tyr	Pro	Thr	Cys	Phe	Pro	Leu	Thr
		115					120					125			
Gln	Phe	Thr	Cys	Asn	Asn	Gly	Arg	Cys	Ile	Asn	Ile	Asn	Trp	Arg	Cys
	130					135					140				
Asp	Asn	Asp	Asn	Asp	Cys										
145					150										

<210> 29  
 <211> 231  
 <212> PRT  
 <213> Homo sapiens

Gln	Cys	Gln	Pro	Gly	Glu	Phe	Ala	Cys	Ala	Asn	Ser	Arg	Cys	Ile	Gln
1				5				10						15	
Glu	Arg	Trp	Lys	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Leu	Asp	Asn	Ser	Asp
			20					25					30		
Glu	Ala	Pro	Ala	Leu	Cys	His	Gln	His	Thr	Cys	Pro	Ser	Asp	Arg	Phe
		35				40						45			
Lys	Cys	Glu	Asn	Asn	Arg	Cys	Ile	Pro	Asn	Arg	Trp	Leu	Cys	Asp	Gly
	50					55					60				
Asp	Asn	Asp	Cys	Gly	Asn	Ser	Glu	Asp	Glu	Ser	Asn	Ala	Thr	Cys	Ser
65					70					75					80
Ala	Arg	Thr	Cys	Pro	Pro	Asn	Gln	Phe	Ser	Cys	Ala	Ser	Gly	Arg	Cys
			85						90					95	
Ile	Pro	Ile	Ser	Trp	Thr	Cys	Asp	Leu	Asp	Asp	Asp	Cys	Gly	Asp	Arg
			100					105					110		
Ser	Asp	Glu	Ser	Ala	Ser	Cys	Ala	Tyr	Pro	Thr	Cys	Phe	Pro	Leu	Thr
		115					120					125			
Gln	Phe	Thr	Cys	Asn	Asn	Gly	Arg	Cys	Ile	Asn	Ile	Asn	Trp	Arg	Cys
	130					135					140				
Asp	Asn	Asp	Asn	Asp	Cys	Gly	Asp	Asn	Ser	Asp	Glu	Ala	Gly	Cys	Ser
145					150					155				160	
His	Ser	Cys	Ser	Ser	Thr	Gln	Phe	Lys	Cys	Asn	Ser	Gly	Arg	Cys	Ile
			165					170						175	
Pro	Glu	His	Trp	Thr	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Gly	Asp	Tyr	Ser
			180					185					190		
Asp	Glu	Thr	His	Ala	Asn	Cys	Thr	Asn	Gln	Ala	Thr	Arg	Pro	Pro	Gly
		195					200					205			
Gly	Cys	His	Thr	Asp	Glu	Phe	Gln	Cys	Arg	Leu	Asp	Gly	Leu	Cys	Ile
	210					215					220				
Pro	Leu	Arg	Trp	Arg	Cys	Asp									
225					230										

<210> 30  
 <211> 40  
 <212> PRT  
 <213> Homo sapiens

Cys	Pro	Ser	Asp	Arg	Phe	Lys	Cys	Glu	Asn	Asn	Arg	Cys	Ile	Pro	Asn
1				5				10						15	
Arg	Trp	Leu	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Gly	Asn	Ser	Glu	Asp	Glu



20 25 30  
 Ser Asn Ala Thr Cys Ser Ala Arg  
 35 40  
  
 <210> 31  
 <211> 80  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 31  
 Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn  
 1 5 10 15  
 Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu  
 20 25 30  
 Ser Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser  
 35 40 45  
 Cys Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp  
 50 55 60  
 Asp Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro  
 65 70 75 80  
  
 <210> 32  
 <211> 119  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 32  
 Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn  
 1 5 10 15  
 Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu  
 20 25 30  
 Ser Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser  
 35 40 45  
 Cys Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp  
 50 55 60  
 Asp Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro  
 65 70 75 80  
 Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile  
 85 90 95  
 Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser  
 100 105 110  
 Asp Glu Ala Gly Cys Ser His  
 115  
  
 <210> 33  
 <211> 166  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 33  
 Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn  
 1 5 10 15  
 Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu  
 20 25 30  
 Ser Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser  
 35 40 45  
 Cys Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp  
 50 55 60  
 Asp Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro  
 65 70 75 80  
 Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile

				85					90					95			
Asn	Ile	Asn	Trp	Arg	Cys	Asp	Asn	Asp	Asn	Asp	Cys	Gly	Asp	Asn	Ser		
			100					105					110				
Asp	Glu	Ala	Gly	Cys	Ser	His	Ser	Cys	Ser	Ser	Thr	Gln	Phe	Lys	Cys		
		115					120					125					
Asn	Ser	Gly	Arg	Cys	Ile	Pro	Glu	His	Trp	Thr	Cys	Asp	Gly	Asp	Asn		
	130					135					140						
Asp	Cys	Gly	Asp	Tyr	Ser	Asp	Glu	Thr	His	Ala	Asn	Cys	Thr	Asn	Gln		
145					150					155					160		
Ala	Thr	Arg	Pro	Pro	Gly												
				165													

<210> 34  
 <211> 108  
 <212> PRT  
 <213> Homo sapiens

Cys	Pro	Ser	Asp	Arg	Phe	Lys	Cys	Glu	Asn	Asn	Arg	Cys	Ile	Pro	Asn		
1				5					10					15			
Arg	Trp	Leu	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Gly	Asn	Ser	Glu	Asp	Glu		
		20						25					30				
Ser	Asn	Ala	Thr	Cys	Ser	Ala	Arg	Thr	Cys	Pro	Pro	Asn	Gln	Phe	Ser		
		35				40						45					
Cys	Ala	Ser	Gly	Arg	Cys	Ile	Pro	Ile	Ser	Trp	Thr	Cys	Asp	Leu	Asp		
	50					55					60						
Asp	Asp	Cys	Gly	Asp	Arg	Ser	Asp	Glu	Ser	Ala	Ser	Cys	Ala	Tyr	Pro		
65					70					75					80		
Thr	Cys	Phe	Pro	Leu	Thr	Gln	Phe	Thr	Cys	Asn	Asn	Gly	Arg	Cys	Ile		
				85					90					95			
Asn	Ile	Asn	Trp	Arg	Cys	Asp	Asn	Asp	Asn	Asp	Cys						
			100					105									

<210> 35  
 <211> 289  
 <212> PRT  
 <213> Homo sapiens

Cys	Pro	Ser	Asp	Arg	Phe	Lys	Cys	Glu	Asn	Asn	Arg	Cys	Ile	Pro	Asn		
1				5					10					15			
Arg	Trp	Leu	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Gly	Asn	Ser	Glu	Asp	Glu		
		20						25					30				
Ser	Asn	Ala	Thr	Cys	Ser	Ala	Arg	Thr	Cys	Pro	Pro	Asn	Gln	Phe	Ser		
		35				40						45					
Cys	Ala	Ser	Gly	Arg	Cys	Ile	Pro	Ile	Ser	Trp	Thr	Cys	Asp	Leu	Asp		
	50					55					60						
Asp	Asp	Cys	Gly	Asp	Arg	Ser	Asp	Glu	Ser	Ala	Ser	Cys	Ala	Tyr	Pro		
65					70					75					80		
Thr	Cys	Phe	Pro	Leu	Thr	Gln	Phe	Thr	Cys	Asn	Asn	Gly	Arg	Cys	Ile		
				85					90					95			
Asn	Ile	Asn	Trp	Arg	Cys	Asp	Asn	Asp	Asn	Asp	Cys	Gly	Asp	Asn	Ser		
			100					105					110				
Asp	Glu	Ala	Gly	Cys	Ser	His	Ser	Cys	Ser	Ser	Thr	Gln	Phe	Lys	Cys		
		115					120					125					
Asn	Ser	Gly	Arg	Cys	Ile	Pro	Glu	His	Trp	Thr	Cys	Asp	Gly	Asp	Asn		
	130					135					140						
Asp	Cys	Gly	Asp	Tyr	Ser	Asp	Glu	Thr	His	Ala	Asn	Cys	Thr	Asn	Gln		
145					150					155					160		
Ala	Thr	Arg	Pro	Pro	Gly	Gly	Cys	His	Thr	Asp	Glu	Phe	Gln	Cys	Arg		
				165					170					175			

Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp Gly Asp Thr  
 180 185 190  
 Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu Gly Val Thr His  
 195 200 205  
 Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys  
 210 215 220  
 Ile Ser Lys Ala Trp Val Cys Asp Gly Asp Asn Asp Cys Glu Asp Asn  
 225 230 235 240  
 Ser Asp Glu Glu Asn Cys Glu Ser Leu Ala Cys Arg Pro Pro Ser His  
 245 250 255  
 Pro Cys Ala Asn Asn Thr Ser Val Cys Leu Pro Pro Asp Lys Leu Cys  
 260 265 270  
 Asp Gly Asn Asp Asp Cys Gly Asp Gly Ser Asp Glu Gly Glu Leu Cys  
 275 280 285  
 Asp

<210> 36  
 <211> 40  
 <212> PRT  
 <213> Homo sapiens

<400> 36  
 Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro  
 1 5 10 15  
 Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp  
 20 25 30  
 Glu Ser Ala Ser Cys Ala Tyr Pro  
 35 40

<210> 37  
 <211> 79  
 <212> PRT  
 <213> Homo sapiens

<400> 37  
 Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro  
 1 5 10 15  
 Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp  
 20 25 30  
 Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr Gln Phe  
 35 40 45  
 Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys Asp Asn  
 50 55 60  
 Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser His  
 65 70 75

<210> 38  
 <211> 126  
 <212> PRT  
 <213> Homo sapiens

<400> 38  
 Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro  
 1 5 10 15  
 Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp  
 20 25 30  
 Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr Gln Phe  
 35 40 45  
 Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys Asp Asn  
 50 55 60

Asp	Asn	Asp	Cys	Gly	Asp	Asn	Ser	Asp	Glu	Ala	Gly	Cys	Ser	His	Ser
65				70					75					80	
Cys	Ser	Ser	Thr	Gln	Phe	Lys	Cys	Asn	Ser	Gly	Arg	Cys	Ile	Pro	Glu
				85				90					95		
His	Trp	Thr	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Gly	Asp	Tyr	Ser	Asp	Glu
			100				105						110		
Thr	His	Ala	Asn	Cys	Thr	Asn	Gln	Ala	Thr	Arg	Pro	Pro	Gly		
		115					120					125			

<210> 39  
 <211> 68  
 <212> PRT  
 <213> Homo sapiens

Thr	Cys	Pro	Pro	Asn	Gln	Phe	Ser	Cys	Ala	Ser	Gly	Arg	Cys	Ile	Pro
1				5				10						15	
Ile	Ser	Trp	Thr	Cys	Asp	Leu	Asp	Asp	Asp	Cys	Gly	Asp	Arg	Ser	Asp
			20				25						30		
Glu	Ser	Ala	Ser	Cys	Ala	Tyr	Pro	Thr	Cys	Phe	Pro	Leu	Thr	Gln	Phe
		35				40						45			
Thr	Cys	Asn	Asn	Gly	Arg	Cys	Ile	Asn	Ile	Asn	Trp	Arg	Cys	Asp	Asn
	50					55					60				
Asp	Asn	Asp	Cys												
65															

<210> 40  
 <211> 248  
 <212> PRT  
 <213> Homo sapiens

Cys	Pro	Pro	Asn	Gln	Phe	Ser	Cys	Ala	Ser	Gly	Arg	Cys	Ile	Pro	Ile
1			5					10					15		
Ser	Trp	Thr	Cys	Asp	Leu	Asp	Asp	Asp	Cys	Gly	Asp	Arg	Ser	Asp	Glu
			20				25						30		
Ser	Ala	Ser	Cys	Ala	Tyr	Pro	Thr	Cys	Phe	Pro	Leu	Thr	Gln	Phe	Thr
		35				40					45				
Cys	Asn	Asn	Gly	Arg	Cys	Ile	Asn	Ile	Asn	Trp	Arg	Cys	Asp	Asn	Asp
	50				55					60					
Asn	Asp	Cys	Gly	Asp	Asn	Ser	Asp	Glu	Ala	Gly	Cys	Ser	His	Ser	Cys
65				70					75					80	
Ser	Ser	Thr	Gln	Phe	Lys	Cys	Asn	Ser	Gly	Arg	Cys	Ile	Pro	Glu	His
			85					90					95		
Trp	Thr	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Gly	Asp	Tyr	Ser	Asp	Glu	Thr
			100				105						110		
His	Ala	Asn	Cys	Thr	Asn	Gln	Ala	Thr	Arg	Pro	Pro	Gly	Gly	Cys	His
		115				120						125			
Thr	Asp	Glu	Phe	Gln	Cys	Arg	Leu	Asp	Gly	Leu	Cys	Ile	Pro	Leu	Arg
	130				135						140				
Trp	Arg	Cys	Asp	Gly	Asp	Thr	Asp	Cys	Met	Asp	Ser	Ser	Asp	Glu	Lys
145				150					155					160	
Ser	Cys	Glu	Gly	Val	Thr	His	Val	Cys	Asp	Pro	Ser	Val	Lys	Phe	Gly
			165					170					175		
Cys	Lys	Asp	Ser	Ala	Arg	Cys	Ile	Ser	Lys	Ala	Trp	Val	Cys	Asp	Gly
		180					185					190			
Asp	Asn	Asp	Cys	Glu	Asp	Asn	Ser	Asp	Glu	Glu	Asn	Cys	Glu	Ser	Leu
		195				200						205			
Ala	Cys	Arg	Pro	Pro	Ser	His	Pro	Cys	Ala	Asn	Asn	Thr	Ser	Val	Cys
	210					215					220				
Leu	Pro	Pro	Asp	Lys	Leu	Cys	Asp	Gly	Asn	Asp	Asp	Cys	Gly	Asp	Gly











Asp Gly Asn Asp Asp Cys Gly Asp Gly Ser Asp Glu Gly Glu Leu Cys  
65 70 75 80  
Asp

<210> 53  
<211> 40  
<212> PRT  
<213> Homo sapiens

<400> 53  
Ala Cys Arg Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val Cys  
1 5 10 15  
Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly Asp Gly  
20 25 30  
Ser Asp Glu Gly Glu Leu Cys Asp  
35 40

<210> 54  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 54  
Ser Gly Phe Ser Leu Gly Ser Asp Gly Lys  
1 5 10

<210> 55  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 55  
Gly Ile Ala Leu Asp Pro Ala Met Gly Lys  
1 5 10

<210> 56  
<211> 10  
<212> PRT  
<213> Homo sapiens

<400> 56  
Gly Gly Ala Leu His Ile Tyr His Gln Arg  
1 5 10

<210> 57  
<211> 11  
<212> PRT  
<213> Homo sapiens

<400> 57  
Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys  
1 5 10

<210> 58  
<211> 9  
<212> PRT  
<213> Homo sapiens

<400> 58  
Gly Ala Leu His Ile Tyr His Gln Arg  
1 5

<210> 59  
<211> 19  
<212> PRT  
<213> Homo sapiens

<400> 59  
Arg Val Thr Tyr His Ser Pro Ser Tyr Val Tyr His Gln Phe Glu Arg  
1 5 10 15  
Arg Ala Lys